LETTERS

Tank Qualification — A Leadership Right of Passage

Dear Sir:

CSM Dudley raises a long-brewing, but I feel underexamined, controversy within the armor/cavalry community (Letter to the Editor, "Ratings Should Be Tied to Tank Qualification," Jan-Feb 96). We indeed have moved away from the concept that leaders should/must qualify their prime mover — tank or Bradley. Unlike Dudley, however, I believe that qualification should not be directly used in rating an individual. Rather, in an indirect fashion, qualification is an indicator of leadership.

Qualifying one's vehicle speaks to two dimensions of a tank/Bradley commander's capabilities — technical competence and leadership.

Officer/NCO vehicle commanders require some base level technical knowledge. Our young soldiers respond to technically competent leaders who know their business. A leader who is worried or unable to qualify will spawn additional "bolos." Should leaders be as much a "tanker" as the section leader or master gunner? No. Our platoon leaders/troop and company commanders/battalion and squadron commanders have other irons in the fire. Should they recognize proper gunnery techniques (or more importantly, improper/unsafe actions)? Obviously.

Confidence is contagious. Winning and qualification breed further success. Leading by example is a staple of successful units.

Gunnery Table VIII is a training event. Unsuccessful engagement should be retrained until task standards are met. However, we must carefully analyze whether unqualified leaders have what it takes to care for our soldiers/units. As Dudley so clearly states, "...if he cannot train his crew and fight his tank, he just might not be able... [to] mentor other tank commanders to train their crews and fight their tanks." Our livelihood is the tank. We are privileged to possess the finest technological equipment manned by the most highly educated and motivated soldiers of any modern army. We should demand that leaders meet certain gates in order to maximize these capabilities.

MAJ DAVID G. MACLEAN
XO to the J4/7, USCENTCOM

Museum Seeks to Acquire Ownership of Patton Statue

Dear Sir:

Visitors to the Fort Knox Patton Museum of Cavalry and Armor find the two most popular exhibits in the Patton section to be the pistols carried by General George S. Patton, Jr., and the life-sized, one-of-a-kind, hand-carved wooden statue of General Patton. Except for the helmet and a few other accouterments, this statue was carved out of a single piece of basswood with such intricate detail that it appears amazingly lifelike.

The statue's owner who originally provided it to the museum on indefinite loan in 1984, has elected to put the statue up for sale. Faced with losing this irreplaceable piece of art, the Cavalry-Armor Foundation, Patton Museum Development Fund — the private organization that for thirty-plus years has raised funds to support the multiphased campaign responsible for building the Patton Museum complex — entered into an agreement with the owner to purchase the statue and an associated painting for $150,000, payable in installments ending in December 1996. While the Army supports the museum with some operating funds, private funds must pay for this exhibit.

The first installment of $25,000 has been made and, to date, a little more than one-third of the money has been raised, much from Patton family members. The drive is now turning to tankers, cavalrymen, veterans, and other patriotic Americans to keep the statue where it belongs — in the museum honoring the man who even today represents mounted warfare.

The Cavalry-Armor Foundation is asking for the support of dedicated, loyal citizens, corporations, and organizations to bring this worthwhile cause to a successful completion. Contributions may be made in any amount to: Save the Patton Statue Fund, P.O. Box 25, Fort Knox, KY 40121.

OWSLEY C. COSTLOW
COL (Ret.), Armor
President, Cavalry-Armor Foundation

Master Gunner School Is Not for Dilettantes

Dear Sir:

SGM Spurling's letter in the January-February issue was absolutely on the mark.

The Army spends a great deal of money to send tankers to Master Gunner School and give them an in-depth education into the "why's" of tank gunnery. Anyone can get the how's" by opening up an operator's manual and spending some time in the tank. Understanding why tanks work the way they do gives meat and substance to the procedures that we use, and to the credibility of master gunners.

For that reason, if you volunteer to go to Master Gunner School, be prepared for some pretty intensive studying and devotion to the art and science of tank gunnery for the rest of your career. Once you are known as a master gunner, you will forever be called upon to assist the commander in "Matters Relating to Tank Gunnery."

That doesn't mean that you will never see a leadership position again, but it does mean that your assignments will vary from the technical aspects of gunnery planning and management, to the intensive leadership challenges of platoon sergeant, first sergeant, command sergeant major, and yes, Sergeant Major of the Army. (Congratulations to SMA McKinney, a master gunner!)

Remember, Department of the Army doesn't select you to attend the Master Gunner Course. You volunteer. And you'd better be prepared to perform as needed, when told, on short notice, for the rest of your career. You won't get proficiency pay, and you won't wear a patch. If you're not prepared to do that, then you're probably not prepared for the intensive curriculum and will only contribute to the course attrition rate. Stay home.

MSG TERRY BALLINGER
Combat Developer
Directorate of Force Developments
Fort Knox, Ky.

Seeks WSRO Participants

Dear Sir:

I am a former armor officer, a member of the Armor Association, and an amateur military historian. I am researching Operation Desert Storm, and am writing to ask for assistance from your readers with regard to one aspect of this operation.

Unlike previous wars, the Army planned to replenish battlefield casualties using preexisting combat arms platoons from units that had not deployed. Each such platoon deployed as a complete unit, with vehicles and equipment, personnel, and platoon leadership. This program was called "Weapons System Replacement Operations," or WSRO for short. Enough tank platoons were deployed to fill two tanks battalions: it does not appear that any scout platoons participated.

The Army is doing nothing to memorialize the participation of these units. I am trying to document the units that participated, and would like to hear from *ARMOR* readers who have information or documents that discuss the WSRO program in general, or identify any of the platoons that participated.

THOMAS D. DINACKUS
4719 Major Court
Alexandria, VA 22312

Why Would the Force XXI Commander Want to Intervene?

Dear Sir:

Is *auftragstaktik* really dead with Force XXI? I must concede the most salient point of both CPT Bateman's article and CPT Brown's letter (*ARMOR,* Jan-Feb 96): battalion commanders have the ability to directly control movement — right down to the individual tank — on the Force XXI battlefield. Indeed, at all levels of training, an officer is taught that he must take care of and preserve his force. This thought alone might lead some battalion and above commanders to look into the microscope and reach down several echelons. But will they want to?

Going back to the basics, I remember being told that the Army found long ago it is easiest to directly command and control only 3-5 people. Tank commanders lead three other tankers; platoon leaders three other tanks; company commanders one XO, one 1SG, and three platoon leaders; and so on. Much more and a leader's ability to effectively control his element is diminished. This is not necessarily because he does not have enough information about these subordinates' actions. Rather, it is just as likely that his subordinates present him with more information than he can process. At the battalion level, its leader in garrison is burdened with commanding five subordinate commanders, an XO, and oftentimes giving direct guidance to four coordinating staff officers and receiving input from such personal staff as the command sergeant major and chaplain. Organized for combat, the commander also picks up several attachments. In the fight, at a bare minimum, he actively communicates with four or more company commanders, his S3 and XO, and, oftentimes, with his staff or attachment leaders. I believe the commander's desire to have these subordinates achieve his intent is enough work, no matter how much intelligence he sees on his screens.

Another Force XXI characteristic working against micromanagement is increased battlespace. As I offered in the Jan-Feb 96 issue, a company in the defense can cover what used to be a battalion sector; a battalion, that of a brigade. Companies in the offense can maneuver in as wide a zone as still allows the force to mass fires when necessary. Although the commander can see his entire force during any mission on his three user-friendly screens, units might be so dispersed prior to the fight that attempting to control individual platoons becomes too difficult a task.

While I believe CPT Bateman and CPT Brown's submissions must serve as a warning to the force, I truly hope they are both wrong. I also hope the inability to effectively apply direct control past that fifth man and the burden of observing quantitatively increased battlespace keeps *auftragstaktik* alive in Force XXI.

CPT MICHAEL L. PRYOR
HQ/1-156 Armor
Louisiana ARNG

Drawing Lessons from Combat: The Desert Is Different

Dear Sir:

I agree with Major R.D. Hooker (Letters, Jan-Feb 96) when he states that we "should be very careful" about applying the lessons learned in desert combat to all operational scenarios. My intent — and apparently I did not stress this adequately — was to apply the lessons of Desert Shield/Storm to preparing for possible future operations in desert or other open terrain. I fully recognize that tanks and light infantry can, indeed do, work well together in many kinds of terrain, as evidenced by Major Hooker's description of the 3-325 Airborne Battalion Combat Team at the CMTC.

The above-mentioned CMTC rotation was noteworthy in three areas:

(1) The impressive toll inflicted on the OPFOR,

(2) The fact that 3-325 controlled two tank and two Bradley platoons,

(3) The omission of casualty figures for 3-325 ABCT.

If it had been a real combat mission, with the ABCT airdropped into an operational area, the (Abrams?) tanks and Bradley Fighting Vehicles — because they are not capable of LVAD delivery — would not have been there to provide support. What effect would the absence of the armored vehicles have had on the damage/casualties inflicted/sustained by 3-325 in the CMTC exercises?

In desert ops, dismounted infantry are at an extreme disadvantage in firepower and tactical mobility when facing an armored/mechanized opponent. Even Major Hooker admits this, when he says, "we know that we can fight heavy forces successfully in all but the most open kinds of terrain." I submit that a smaller force, equipped with light tanks and airborne fighting vehicles would be far more useful and effective in such open terrain than would a much larger number of dismounted infantrymen and TOW-HMMWVs.

In the desert and other open terrain, I still firmly believe that parachute infantry should have the same degree of mobility and protection as the light tanks with which they will operate. This is not a "veiled call" for mechanization — I'm stating it straight out. However, because of limited airlift capability, it is probably not practical to mechanize every airborne battalion, nor is it even desirable to do so, as there will always be plenty of scenarios where mechanized forces are not needed.

It would be unwise to rigidly apply the lessons of desert war to all situations, but neither should we ignore what was learned in Southwest Asia. Shouldn't we deploy a force best suited to the mission, enemy, and terrain, rather than simply opting for the greatest number of parachutes that can be dropped?

STANLEY C. CRIST
San Diego, Calif.

Information Technology and the Armored Force

Dear Sir:

Over the past few years, there has been much talk about applying information technology (GPS, IVIS, Paladin, etc.) to the armored force and other elements of the Army. Ironically, it has only been recently, as we create digitally-linked brigades, that there has been any significant discussion about the impact of this new technology on our standard operating procedures, tactics, training, and so on. In the pages of January-February 1996 edition of *ARMOR,* we have seen both exhortations from the commander of the Armor Center to increase the tools in our virtual toolbag and another article in the continuing series of thought pieces from officers in the field (such as CPT Bateman's article on the death of *auftragstaktik*) about the possible implications of digitization.

Indeed, it appears that we are going where no Army has gone before. Where can we turn for guidance? What do these changes mean? How can we harness these new technologies and ride, as our cavalry predecessors did, into the unknown?

There are current, real-life examples we can draw from. Would you believe me if I said there is an industry that has been grappling with information technology issues for 15 years? Look around. In modern office buildings world-wide, people in the private sector deal with the implications of information technology everyday. Fax machines, LANs, WANs, cell phones, pagers, the World Wide Web, laptop computers, email, FTP, TCP/IP, teleconferencing, client-server technology, (and the list goes on!) have made the old fashioned, pencil-and-paper way of doing business just as obsolete as acetate and alcohol markers are to the digitized force. As a graduate student in information systems (also known as computers, by non-technical types), an analyst at an information technology consulting firm, and part-time cavalry scout platoon leader, I've had the opportunity to observe these changes firsthand and consider their impact on soldiering in the not-so-distant future. Although World Wide Web home

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page design isn't much like a zone recon, at a conceptual level there are many lessons the Army can learn (for free!) from the experience of private industry in the very difficult time it's had at maximizing the effectiveness of expensive new technology.

Very generally speaking, below are a few of the many "lessons learned" and other issues I've identified from private businesses as they apply to the armored force of tomorrow:

Information is a strategic and tactical resource. Remember the discount airline, People Express? American Airlines put them out of business with the help of its ticketing and aircraft routing computer system. American was able to use its information system to undercut People Express on key routes while recouping losses on others. Likewise, the digitized battlefield commander of the near future must be able to use "strategic" information about the enemy — obtained by satellites, JSTARS, scouts, or contact reports — to effect the battle at key tactical points. His ability to use information effectively and thereby "win" the information war will give him a decisive advantage over the enemy.

Data overload vs. just enough of the right information. Although data (raw facts or figures) is nice, information (data with context and meaning) is what we're after. The solution is to identify the core of what individuals need to know to do their jobs effectively and then make sure those people get it. Although my commander today would say that we platoon leaders don't report enough, the future commander may encounter information overload from having so many data sources (as mentioned above) trying to send him information all at once. Although something like IVIS can enable us to pass reports more efficiently, the question is, are we really passing the right information? For example, can we do better than the SPOTREP? Does it convey the right information? If we're not telling commanders or subordinates what they need to know in a format they can use, we're just filling the air with bogus FM waves more efficiently than we did before.

E-mail and the demise of middle management. E-mail (or electronic mail, for the unconnected) is the latest implementation of the "asynchronous communication" concept. "Asynchronous communication" means that the sender and the receiver don't have to talk to each other at the same time to communicate. E-mail, as the modern version of this concept, enables upper level management to communicate inexpensively and instantaneously with their employees. Likewise, an employee can reply directly, without having to go through layers of bureaucracy. The combination of quick communication and a better educated workforce has resulted in the position of "manager" becoming irrelevant in many companies. The effect of this phenomenon has been to "flatten" organizational hierarchies, thereby enabling quicker response to changing situations. If battalion commanders, by virtue of the information they have available, become more situationally aware (as CPT Bateman suggests) than company commanders, then what would we need the company commander for? If we can't come up with a good answer, then maybe the company commander position would go the same way as that of the private industry middle manager. Likewise, if we were able to "plug in" platoon leaders to the same information sources and train them accordingly, we would reduce the role of CPT Bateman's battalion commander to the simple position of report-passer. Since all of that can be automated with information technology too, what would we need battalion commanders for? In this new scenario, platoons would be enabled to operate in the finest traditions of *auftragstaktik* while being even more responsive than before to the distant command control cell of your choice (brigade, division....?). At the macro level, we can apply the same concept. Corps and MACOMs would also become irrelevant, as DA would have situational awareness of brigades deployed world-wide. The bottom line is that information technology will get us to the point where the layers of command and control that we rely on today to make decisions and pass information will

no longer enhance, but hinder, combat effectiveness.

Greater efficiency and effectiveness gains (read as combat effectiveness) are obtained by reworking old procedures rather than by "paving a cowpath with silicon." One of the most expensive lessons private businesses have learned is that, if you automate procedures which don't work or are only moderately effective, all you've got afterwards is automation which doesn't get the job done either. To date, we have digitized a battalion plus support elements, but the orders process, tactics, and procedures are not substantially different than they were decades ago. We will see the gains we expect to see ONLY when we make information technology support the way we want to fight tomorrow, instead of applying information technology to the way we fight today.

If there's one thing I've learned in the Army, school, or the workplace, it's the value of asking the right questions. In many respects, the Armor community has not framed the Force XXI debate properly. Instead of asking, "what do we do with this technology?" the question should be, "how do we want to accomplish the mission, and what information technology do we need to do that?"

In closing, consider a historical example of the application of a new technology. Between World War I and II, the cavalry school conducted field exercises where house-mounted cavalrymen would be trucked, horses and all, to battle. However when the battle was joined, it was anticipated that the trucks would be abandoned and the cavalryman would ride his mount into combat, as cavalrymen had for centuries. Today we realize the futility of attempting to turbocharge horses. Let's not make the same mistake and attempt to plate our tanks with silicon.

1LT ANDREW D. GOLDIN
A/1-158 Cav (Recon)
Maryland ARNG

Auftragstaktik Is Not Dead

Dear Sir:

As a future company or troop commander, I read CPT Robert L. Bateman's article (Jan-Feb 96) with some concern until I realized that the situation he is describing exists now, in the non-digital chain of command. The challenge of granting company- and platoon-level leaders the authority to execute the mission is a leadership question for the battalion or squadron commander and has little or nothing to do with digitization. The *Auftragstaktik* concept implies centralized planning, decentralized execution. The digital battlefield shortens the planning cycle and optimizes decentralized execution.

Digital communication allows us to bring initiative, agility, depth, synchronization, and versatility to an increasingly lethal and empty battlefield. Digitization shortens our decision cycle, but does not fundamentally change our culture.

The concern CPT Bateman is expressing is valid since the way we fight will change, based on the information available to Force XXI commanders. Where the commander positions him or herself on the battlefield has been the subject of debate in professional military circles since before Alexander the Great. Digitization just adds another factor to the commander's planning process. What we may find in the Information Age is that, just as there are virtual communities, there will also be virtual locations on the battlefield. CPT Bateman is right — the commander will be able to "see" more of the battlefield from a purpose-built command vehicle than from a HMMWV or Bradley on the frontline. What we must change is the paradigm that the commander must be forward with his troops to best command. The commander, as always, must position himself where he can best visualize the battlefield and COMMAND.

Leaders must always balance directive with informative communication. This is true from platoon leader through general officer. In response to CPT Bateman's examples, why is the battalion commander on the platoon net, anyway? The battalion commander, instead of saying "Platoon X, orient left and destroy enemy forces there," should say, "Company Y, there is an enemy force on Platoon X's left flank; destroy it." The company commander learns that his battalion headquarters is doing its job, providing him with information and a mission. The soldiers (over time) learn that, even though to them the battlefield looks empty, someone at battalion is watching out for their safety and making the RIGHT decisions at the right time. Besides, the company commander is then free to manever his platoons to accomplish the mission, and the platoon leaders are free to maneuver sections and teams. *AUFTRAGSTAKTIK!*

1LT KEITH E. BESHERSE
Assistant S3
2-17 Cavalry
Ft. Campbell, Ky.

Do We Still Test Station 5A?

Dear Sir:

When was the last time that anyone in an armor battalion heard, "The purpose of this test is to evaluate your ability to clear the main gun, and remove, disassemble, assemble, install, perform a function check, and conduct a firing circuit check on the M256 breechblock."

Can't remember? Why is that? Well, an informal poll, conducted on Ft. Knox, indicated one reason. The breechblock or associated parts get damaged or lost during the test, rendering the vehicle non-mission capable for an extended period of time. The three most common parts that get damaged are the firing pin, the plunger, and the extractor shaft.

The firing pin is usually broken during lowering of the breechblock or installing the breechblock. If the crewman doesn't remove the firing mechanism prior to lowering the breechblock from the breech mount, the firing pin will be snapped off. This also occurs if he installs the firing mechanism when the breechblock is on the floor prior to installing it back into the mount. It is also broken if it is set on the ledge of the turret, causing it to fall on to the floor.

How can this be prevented? One way is to ensure that the crewman and evaluator are properly trained and made aware of critical points in the test that may result in damage to the equipment. Another way is to add a warning box prior to step W in the -10 indicating that the firing mechanism must be removed prior to doing step W. Also a warning box prior to step A indicating that the firing mechanism should not be in place. As far as preventing it from falling, placing it in the flashlight holder at the TC's station is one of a few solutions.

The plunger gets stuck up in the breech mount or shoots out into the turret, rolling under the turret sub floor.

What causes this? Sometimes the plunger gets burred or damaged during routine maintenance when using a screwdriver to push it up into the breech mount. It slips off, causing it to burr so that it will not release from its slot when trying to remove it during step S of the -10. Use the fabricated plunger tool instead of the screwdriver. *PS Magazine* has the instruction for fabricating a plunger tool.

The extractor shaft gets bent against the 7.62 ammunition stowage box and radio rack while the crewman attempts to lower or raise the main gun because he fails to completely remove the extractor shaft from the breech mount. Generally, when the crewman installs the shaft and finds that it is not aligned properly, he attempts to lower or raise the main gun without removing the shaft, causing the shaft to get bent against the 7.62 ammunition stowage box and radio rack. This can be prevented by simply reading the cautions in the -10 prior to step T and by adding that same caution prior to step G.

Does breaking or damaging any of these parts warrant a reason for not testing this station? A firing pin costs $11.58, a plunger costs $10.20, and an extractor shaft costs $223.00. They take, on average, anywhere from 21 days to 90 days to come in. Each duty station varies in the amount of time it takes to receive parts. The cost of the part is not significant enough to stop us from training or testing this station. However, the amount of time the vehicle is down awaiting parts could have an impact on this. A soldier is trained to clear, disassemble, assemble, perform a function check, and load his individual weapon. The tank crew should keep the same standard when

maintaining their main gun. It is the price of our profession.

CPT RICHARD R. ROULEAU
HHT, 3/16 Cav, Ft. Knox, Ky.

SGT CARL L. WANDREI
C Trp, 4/16 Cav, Ft. Knox, Ky.

Maneuver Warfare: Just "Buzz Words?"

Dear Sir:

I just finished reading Captain Vandergriff's article, "The Exploitation from the Dieulouard Bridgehead," in the September-October 1995 edition. I found the whole article interesting, but I agreed with very few of Captain Vandergriff's conclusions. My focus of disagreement can be summed up in two small words: "buzz words."

I would like to find, somewhere, a clear definition of "Maneuver Warfare," and, yes, I have read the book. So far as I can find, it appears to be gettin' there fastest with the mostest, attacking the bad guys where they ain't, and supporting the guys that do the best. All of these make simple common sense. Unfortunately, the advocates of "Maneuver Warfare" can't stop there — they seem to feel that by a suitable application of buzz words and other adjectives, they can both supply a coherent doctrine and cure the common cold.

History is not, despite what we like to think, perfect 20/20 hindsight. There can be little doubt that the exploitation from the Dieulouard Bridgehead was a successful operation. I submit that the reasons that the operation was successful are because of combat-hardened men, a weakened enemy, and outstanding leadership. We might fault General Eisenhower or General Patton, but we were not there, and Monday morning quarterbacking will not change the fact that we won that war.

I am all for a stable manning system that promotes excellence and weeds out incompetence. I am all for keeping doctrine up to date with technology. I have never been, am not now, and will never be in favor of replacing successful doctrine with buzz words and euphemisms.

SFC MATT STANCHFIELD
B/1-163 IN, MTARNG
Butte, Mont.

DMA Seeks Input from Field

Dear Sir:

I am a cartographer with the Defense Mapping Agency (DMA) here in St. Louis.

Recently, my newly-formed team completed team training. As a result of this effort, we are is seeking input from the users of DMA products so that we might improve those products. Being in dialogue with our customers would give us an improved sense of purpose.

I am seeking comments from your readers. Already, one soldier has told me that he uses a magic marker to mark the grid values on 1:50,000 and 1:100,000 scale TLM maps to make them easier to see.

Are there any ideas out there from one person or a small group which allow them to outperform others? These new ways, if adopted by all, could result in everyone being more successful. New ideas might save us $$$ or you lives.

If your readers would like to learn more about DMA products, e-mail: CoghlanT @DMA.gov for a DMA Corporate Report. I can be reached at CarlsonW@DMA.gov.

BILL CARLSON
Defense Mapping Agency
St. Louis, Mo.

New Systems Will Anticipate Logistics and Maintenance Needs

Dear Sir:

I read with interest the article, "Regenerating Combat Power at the National Training Center," published in the January-February 1996 issue. We in the Ordnance Corps agree with the maintenance problems encountered by units not only during rotations at the NTC, but in any training or field environment.

I believe it is important to outline to the Armor community that the Ordnance Corps is addressing these problems by leveraging technology, a long-term, definitive solution to the maintenance problems we are experiencing. Several concepts are already in the works to overcome many of the specific maintenance challenges presented in the article. While these enablers are being developed, you can rest assured that the Ordnance Corps will continue to work diligently and intelligently to maintain readiness for Armor.

Currently, we are developing diagnostic/prognostic modules and sensors to capture and report maintenance problems. This concept, being worked with commercial manufacturers, will also anticipate repair part needs and provide an automated link to the appropriate support personnel for action. We will use laptop computers to extract this data, then analyze, troubleshoot, order, and transfer data via various automated communications systems. This has shown very real potential for creating a total anticipatory and situationally-aware logistical and maintenance environment.

We are also developing interactive modular test and diagnostic/prognostic equipment which can be carried and operated by a single person. This equipment can be used for both troubleshooting and training at all levels of maintenance. The same equipment will be used in both field and garrison locations, with information transmitted via satellite or Internet. This technology is available today and is currently being tested or scheduled for testing.

Another example of our initiatives to improve customer support is a device known as the Digital Diagnostic and Prognostic System (DDAP). This system, being worked with the Mounted Battle Lab, is essentially a small sensor mounted on tank engines to collect, store, and analyze turbine performance. The DDAP can alert maintainers to potential, pending catastrophic failures, and also (via SINCGARS) provide real-time ammo and fuel status to logistical support activities.

All of these systems will not only provide considerable savings in manpower and monetary resources, they will also improve our ability to anticipate battlefield logistical and maintenance requirements. This means increased readiness for the supported armor unit.

The Ordnance Corps also has, in the early stages of development, a Standard Maintenance System (SMS). This will replace the current non-interactive system (SAMS/ULLS). Electronic Technical Manuals are being produced on CD ROM, eliminating the need to maintain bulky, paper technical manuals. With the addition of the capability to interact with the current ULLS-G system, the soldier can order his repair parts from the same system.

As players in the Combined Arms Support Command ongoing initiatives in Battlefield Distribution and Velocity Management, we are working to significantly improve order ship time, asset visibility, and the rapid delivery of critical Class IX repair parts.

These are exciting times as we move into the 21st Century. We must leverage technology to improve our maintenance and supply processes. While this will not solve all of our maintenance problems, and obviously won't solve our problems of today right away, we firmly believe that these types of enablers will make us more efficient and effective in serving our soldiers and meeting the demands of the maneuver commanders. The result is increased combat power.

ROBERT D. SHADLEY
BG, USA
Chief of Ordnance

Armor/Cav Gunnery/Training Doctrine Answers

Any question pertaining to Armor/Cav gunnery/training doctrine should be addressed to: Gunnery Training and Doctrine Branch, Ft. Knox, Ky., DSN 464-1736/5807/5765, Commercial: (502) 624-1736/5807/5765, FAX: (502) 624-5708; e-mail: ATSBSBEE@knox-emh1.army.mil.